

I. AMENDMENTS

AMENDMENTS TO THE CLAIMS

Please enter the amendments to claims 15, 17, and 18, as shown below.

Please enter new claim 66, as shown below.

1. (Withdrawn) A non-human animal model characterized by having abnormal DGAT activity, wherein said abnormal DGAT activity results from a DGAT genomic modification.
2. (Withdrawn) The animal model according to Claim 1, wherein the animal is further characterized by having decreased endogenous DGAT expression relative to a corresponding wild-type control.
3. (Withdrawn) The animal according to Claim 2, wherein the animal is heterozygous for a defect in an endogenous DGAT gene.
4. (Withdrawn) The animal according to Claim 2, wherein the animal is homozygous for a defect in an endogenous DGAT gene.
5. (Withdrawn) The animal according to Claim 4, wherein said animal is an endogenous DGAT gene knockout animal.
6. (Withdrawn) The animal according to Claim 5, wherein said animal further comprises an exogenous DGAT coding sequence which is expressed in said animal.
7. (Withdrawn) The animal according to Claim 6, wherein said exogenous DGAT coding sequence is a human DGAT coding sequence.
8. (Withdrawn) The animal according to Claim 1, wherein the animal is further characterized by having increased endogenous DGAT expression relative to a corresponding wild-type control.

9. (Withdrawn) The animal according to Claim 8, wherein said increased endogenous DGAT expression results from the presence of extra endogenous DGAT coding sequences.
10. (Withdrawn) A cell having a disrupted endogenous DGAT locus.
11. (Withdrawn) The cell according to Claim 10, wherein said cell is an endogenous DGAT knockout.
12. (Withdrawn) The cell according to Claim 11, wherein said cell is a non-human cell.
13. (Withdrawn) The cell according to Claim 12, wherein said cell is a mouse cell.
14. (Withdrawn) The cell according to Claim 13, wherein said cell further comprises a coding sequence for a human DGAT polypeptide, wherein said coding sequence is expressed in said cell.
15. (Currently amended) A screening assay for determining a candidate agent's diacylglycerol O-acyltransferases (DGAT) [[DGAT]] modulatory activity, said ~~method~~ assay comprising:
 - (a) contacting a DGAT polypeptide with said candidate agent, wherein said DGAT polypeptide comprises an amino acid sequence having at least 90% amino acid sequence identity to the amino acid sequence set forth in SEQ ID NO:6; and
 - (b) detecting any change in activity of said DGAT polypeptide compared to a control to determine said candidate agent's DGAT modulatory activity.
16. (Original) The screening assay according to Claim 15, wherein said DGAT modulatory activity is inhibitory activity.
17. (Currently amended) The screening assay according to Claim 15 ~~[[16]]~~, wherein said DGAT polypeptide comprises an amino acid sequence having at least 98% amino acid sequence identity to the amino acid sequence set forth in SEQ ID NO:6 ~~is a human DGAT~~.

18. (Currently amended) The screening assay according to Claim 15 [[16]], wherein said DGAT polypeptide comprises the amino acid sequence set forth in SEQ ID NO:6 ~~is mouse DGAT~~.
19. (Original) The screening assay according to Claim 16, wherein said screening assay is an in vitro screening assay.
20. (Original) The screening assay according to Claim 16, wherein said screening assay is an in vivo screening assay.
21. (Original) The screening assay according to Claim 20, wherein said contacting comprises introducing said candidate agent into a cell that includes said DGAT polypeptide.
22. (Withdrawn) The screening assay according to Claim 21, wherein said cell is a cell according to Claim 14.
23. (Withdrawn) The screening assay according to Claim 21, wherein said contacting comprises administering said candidate agent to an animal according to Claim 1.
24. (Withdrawn) A screening assay for determining a candidate agent's DGAT expression modulatory activity, said assay comprising:
- (a) contacting a DGAT polypeptide expression cassette with said candidate agent;
- and
- (b) detecting any change in expression of said DGAT polypeptide expression cassette compared to a control to determine said candidate agent's DGAT expression modulatory activity.
25. (Withdrawn) The screening assay according to Claim 24, wherein said expression modulatory activity is inhibitory activity.
26. (Withdrawn) The screening assay according to Claim 24, wherein assay is in vitro.
27. (Withdrawn) The screening assay according to Claim 24, wherein said assay is in vivo.

28. (Withdrawn) The screening assay according to Claim 24, wherein said DGAT polypeptide is a human DGAT.

29. (Withdrawn) The screening assay according to Claim 24, wherein said DGAT polypeptide is a mouse DGAT.

30.-65. (Canceled)

66. (New) The screening assay according to Claim 15, wherein said detecting comprises detecting incorporation of a detectably labeled fatty acyl CoA into a diacylglycerol acceptor.